

Application No. 09/848,827
Amendment Dated July 29, 2004
Response to Office Action dated March 25, 2004

REMARKS

By this Amendment, the Specification has been amended and new Claims 18-25 have been added. Claims 1-25 are currently pending.

Enclosed herewith as Exhibit A is a Revocation/Appointment of Power of Attorney and Statement Under 3.73(b) identifying Checkpoint Systems International GmbH as the Assignee of the present application who has appointed the undersigned's law firm as the attorneys of record in the present application.

The Specification (on page 7, line 5) has been amended to include the U.S. patent number corresponding to Application Serial No. 09/315, 452.

The Examiner has rejected Claims 1-2, 4-7, 12 and 14-15 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,510,769 (Kajfez, et al., hereinafter "Kajfez") in view of U.S. Patent No. 6,232,878 (Rubin, hereinafter "Rubin"). In particular, the Examiner states that:

Regarding claims 1, 12, Kajfez discloses a transmitter 12 for radiating first electromagnetic signal at a predetermined primary frequency (transmitter 12 generates energy at predetermined frequency within a surveillance zone) (col. 4, lines 7-10); a resonant tag secured to the article (a resonant security tag 18 secured to article 20) (col. 4, line 31) for generating a second electromagnetic signal in response to receiving the first electromagnetic signal, the second electromagnetic signal being at a primary frequency and at a predetermined secondary frequency different from the primary frequency (security tags on article 20 shows a dual resonant frequency with a first and a second security tags which is different from the first resonant frequency) (col. 5, lines 44-62); and generating an output signal when the secondary frequency is detected in the second electromagnetic signal (alarm enabling portion of the receiver is modified so that an alarm is not sounded unless the receiver detects and verifies the presence of a tag within the detection zone 16 of the two resonant frequencies) (col. 7, lines 63-67).

Kajfez discloses all the limitations above but fails to explicitly disclose a receiver for receiving a second electromagnetic signal; a computer connected to an output of the receiver, said computer processing the received second electromagnetic signal.

However, Rubin discloses a receiver for receiving a second electromagnetic field (receiver 18 for receiving second electromagnetic field) (col. 10, lines 17-20); a computer connected to an output of the receiver (data processor 20 connected to an output of the receiver 18) (fig. 3), computer processing the received second electromagnetic signal (the receiver 18 operates to detect the disturbances in the electromagnetic field from the received alternating electric signal to a data processor 20) (col. 8, lines 55-61).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Rubin in Kajfez. Doing so would detect the presence or absence of the security tag in order to prevent theft or unauthorized removal of articles and to minimize false alarms wherein users can feel safer by this system because it ensures against theft as taught by Rubin (col. 1, lines 12-57). (Office Action, pages 2-3).

Applicants respectfully disagree for the following reasons.

Kajfez does not disclose a transmitter for radiating a first signal at a predetermined frequency.

In particular, Kajfez states that the transmitter sweeps through a range of frequencies:

As is generally well known to those skilled in the art, in EAS systems of the RF type, as illustrated in FIG. 1, the transmitter 12 functions to generate energy at a predetermined frequency which is transmitted through the transmitter antenna to establish an electromagnetic field within the surveillance zone 16. Typically, because of manufacturing tolerances within security tags, transmitters 12 generate energy which is continually swept up and down within a predetermined detection frequency range both above and below a selected center frequency at a predetermined sweep frequency rate. For example, if the desired center or tag frequency to be transmitted is 8.2 Mhz, the transmitter 12 may continually sweep up and down from about 7.6 Mhz to 9.0 Mhz at a sweep frequency rate of 60 Hz. Other frequency ranges and sweep rates are known in the art and are not considered a limitation on the present invention. (Emphasis added, Kajfez, col. 4, lines 5-20).

and

The EAS system 10 functions to detect the presence of a security tag 18 within the surveillance zone 16, particularly a security tag 18 secured to an article 20 to be protected. Security tags 18 for use in such EAS systems are generally well known in the art and include a resonant circuit, typically formed of a combination of one or more inductors and one or more capacitors, having a resonant frequency which corresponds to the predetermined center or other frequency within the swept frequency range of the transmitter 12. (Emphasis added, Kajfez, col. 4, lines 28-37).

In fact, Kajfez teaches away from transmitting a first signal at a predetermined frequency because Kajfez is sweeping through a range of frequencies. If the transmitter is sweeping through a range of frequencies, the emitted frequency is by definition not a predetermined primary frequency. Thus Kajfez does not anticipate this specified feature. Furthermore, combining Kajfez with Rubin does not make up for this deficiency

The Examiner states that Kajfez does not disclose a receiver for receiving a second electromagnetic signal. However, Kajfez clearly does disclose this feature:

...To enhance the ability of the receiver 14 to discriminate between the multiple frequency tag and other signals within the surveillance zone 16, the detection algorithms of the receiver 14 are modified to look for each of the different resonant frequencies of the tag...(Emphasis added, Kajfez, col. 7, lines 58-62).

Since the Examiner relies on using this deficiency of Kajfez to provide motivation to combine Rubin with Kajfez, the fact that Kajfez does disclose feature makes the alleged motivation of the §103(a) rejection to combine these references incorrect.

The Examiner has also stated that Rubin allegedly teaches “a second EM receiver generated to receive a second EM field (col. 10, lines 17-20).” This statement is also incorrect. EM receivers do not receive EM fields. Rubin does not disclose this property in the cited lines either. Since Rubin doesn't teach the property the Examiner has alleged, the Examiner's reason for combining Rubin and Kajfez is flawed.

It is possible that the Examiner may have meant that Rubin teaches a second EM receiver to receive a second EM signal. However, this second signal is at the same frequency as the first signal. Applicants' device explicitly states the two signals are not at the same frequency. The purpose of the Kajfez second signal is simply to test whether or not the tag has been deactivated by the first EM field:

Referring now to FIG. 3 there is shown an apparatus 10' for deactivating a security tag 14' according to a third embodiment of the present invention. The third embodiment includes a previously described transmitter 12' comprising a previously described numerically controlled oscillator 416 (not shown) which generates a first alternating electric signal, the frequency of which varies in accordance with a numerical frequency control signal and includes frequency components equal to the resonant frequency of the security tag 14'. The apparatus 10' further includes a previously described clock 400 (not shown) having a substantially fixed frequency connected to the numerically controlled oscillator 416, the frequency of the first alternating electric signal being restricted to an integer multiple of an integer sub-multiple of the frequency of the clock 400. The transmitter 12' also includes a transmitting antenna 16a' connected to the numerically controlled oscillator 416 for receiving the first alternating electric signal and establishing a first electromagnetic field within the deactivation zone wherein the first electromagnetic field interacts with the security tag 14' to deactivate the security tag 14'.

In use, the deactivation apparatus 10' as described above employs a transmitter 12' and antenna 16a' capable of generating sufficient energy to cause one or more of the security tag 14' components to either short circuit or open circuit when exposed to the first electromagnetic field. The means for amplifying the numerically controlled oscillator 416 output signal to provide the required electromagnetic field energy for deactivation are well known to those skilled in the art of EAS systems and need not be described here. As known to those skilled in the art the deactivation apparatus 10' may be actuated either manually or automatically from external sensors to generate the first electromagnetic field. (Emphasis added, Rubin, col. 9, line 47 to col. 10, line 12).

The second signal is never received by the receiver since the tag has been deactivated. Thus, even if the combination of Kajfez in view of Rubin was proper (which it is not for the reasons stated

previously) the combination would not disclose all of the features of the claimed invention, because the two signals of Rubin are at the same frequency and the second signal is not even received by the Rubin tag.

With respect to the Examiner's assertion that it would have obvious to one skilled in the art to incorporate the teachings of Rubin in Kajfez, Applicants respectfully submit that the Examiner has not provided proper motivation to combine Kajfez in view of Rubin. Kajfez discloses a circuitry tag designed to be used with a specific detection system as outlined by Kajfez. The Rubin device would require substantial and unobvious modifications to possibly work with Kajfez. There is no suggestion in either reference that the Rubin device could work with a dual circuit tag of Kajfez. Furthermore, the Kajfez device already contains a system to detect the presence of a tag in the vicinity of an EM field. There is no motivation to add the teachings of Rubin to Kajfez when Kajfez discloses all of the advantages of Rubin. The statement, "Doing so would detect..." is taken from the context of using the Rubin device as opposed to no security device at all. That statement does not provide any motivation to specifically combine Rubin with Kajfez. Thus, for all of these reasons, Applicants respectfully submit that Claims 1, 8, 12, and 16 are patentable over the art of record and Applicant respectfully request that the §103(a) rejection be withdrawn¹.

¹The Examiner has rejected Claims 8 and 16 on similar grounds. These claims specify a system/method similar to 1 and 12 but where the resonant tag includes a plurality of resonant circuits, each of which resonant at one of the different resonant frequencies and whereby the second electromagnetic signal comprises a plurality of secondary frequencies, each of which corresponds to one of the different resonant frequencies. Also, this system/method generates an output signal corresponding to information stored in the plurality of resonant circuits. However, for the same reasons delineated with regard to Claims 1 and 12, Applicants respectfully submit that Claims 8 and 16 are patentable over the art of record.

Claims 2 and 9 are dependent upon Claims 1 and 8, respectively, and are patentable for the same reasons. Furthermore, the Examiner asserts that the resonant circuits are electromagnetically coupled (Office Action, page 4, first paragraph). However, the resonant circuits of Kajfez are not electromagnetically coupled as evidenced by Kajfez clearly disclosing the contrary:

...Since the magnitudes of the flux passing in the two opposite directions is equal or nearly equal, the net flux flowing through the other tag as a result of the current flow within the one tag is zero or near zero resulting in the coupling between the tags 120, 122 being zero or near zero. In this manner, the tags 120, 122 function essentially independently of each other...(Emphasis added, Kajfez, col. 6, lines 18-23).

Thus, Kajfez discloses that the circuits have zero or nearly zero coupling. Thus, this feature is not disclosed by the prior art.

Regarding Claims 5 and 15, the examiner states that Kajfez discloses the detection of the signals by the receiver is successive. Not only does Kajfez not disclose this property, Kajfez discloses the opposite property. In particular:

Tags having two or more resonant frequencies in accordance with either of the above-described embodiments may be employed in connection with an existing EAS system 10 for enhanced tag detection. As long as each of the resonant frequencies of the tag are within the range of the frequencies swept by the transmitter 12, no substantial modification need be made to the transmitter 12. To enhance the ability of the receiver 14 to discriminate between the multiple frequency tag and other signals within the surveillance zone 16, the detection algorithms of the receiver 14 are modified to look for each of the different resonant frequencies of the tag. In addition, the alarm enabling portion of the receiver is modified so that an alarm is not sounded unless the receiver detects and verifies the simultaneous presence of a tag within the detection zone 16 which is resonating at each of the two or more predetermined resonant frequencies. (Emphasis added, Kajfez, col. 7, lines 52-67).

Thus, Kajfez actually discloses that the detection occurs only with the simultaneous presence of two or more resonant frequencies. Thus, the feature of Claims 5 and 15 that the receiver is tuned to receive the first and second signal successively is clearly not anticipated or rendered obvious by Kajfez in view of Rubin.

Regarding Claim 6-7, these claims are dependent upon Claim 1 and are patentable for the same reasons. In addition, Claim 6 specifically requires a non-harmonic relationship. Kajfez is silent as to the harmonic relationship between the resonant frequencies. Thus, this feature is not explicitly or implicitly taught by Kajfez.

Regarding Claims 3 and 13, the Examiner has cited U.S. Patent No. 4,429,302 (Vandebult, hereinafter "Vandebult") in combination with Kajfez and Rubin as rendering these claims obvious thereover. However, Claims 3 and 13 are dependent upon Claims 1 and 12, respectively, and are patentable for the same reasons. In addition, Claims 3 and 13 specify a first signal that is pulse amplitude modulated. In contrast, in the Vandebult device, a pulse is received and the amplitude modulated component is extracted. Vandebult does not provide any motivation to perform this practice on a dual circuit tag like Kajfez and does not state the advantage of even using this extraction process. The Examiner states, "Doing so would detect accurately presence of a tag within the detection zone." Simply put, this is an unsupported allegation; the Examiner has not put forth any evidence to support this statement, nor suggested why this particular combination is obvious.

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There appears to be no reason why one would combine Vandebult with Kajfez since Kajfez already accurately discloses the step of accurately detecting a tag in a detection zone.

Claims 4, 10-11, 14, and 17 are dependent upon Claims 1, 8, 8, 12 and 16, respectively, and are patentable over Kajfez in view of Rubin for the same reasons.

Thus, for all of these reasons, Applicants respectfully submit that Claims 1-17 are patentable over the art of record and Applicants respectfully request that the §103(a) rejections be withdrawn.

Newly added claims 18-25 are patentable not only for the reasons disclosed above, but also for the following reasons:

New system Claim 18 specifically recites the use of a non-sweeping transmitter. A sweeping transmitter sends multiple signals at multiple frequencies. Claim 19 specifically requires the transmitter to send a signal at only a predetermined frequency. In contrast, Kajfez discloses a sweeping transmitter and encourages its use.

New Claim 20 specifies a device that involves a second signal and the receiver which listens for the second signal at a different frequency than the first signal. In contrast, the Kajfez device and the Rubin device have receivers that listen for a signal at the same frequency as the transmitted frequency.

New Claims 21 and 22 pertain to the second circuit being energized in response to the first circuit becoming energized. In contrast, the Kajfez device has two circuits that are not linked.

Kajfez states that the circuits are magnetically decoupled. The resonance of the second circuit is completely independent of the resonance of the first circuit in the Kajfez device.

Regarding new Claim 23, the claimed device is not transmitting the first signal at the time the second signal is received. In contrast, the Kajfez and Rubin transmitters are transmitting the first signal at the time the receivers receive the same first signal back from the circuit.

Regarding Claims 24 and 25, the Kajfez and Rubin devices receive a forcing function back from the circuit. That is, the receiver receives the combined signal from the first transmitted signal from the transmitter and the returned resonance signal from the energized circuit. In contrast, in Applicants' device, Claim 24 requires that only the natural (not augmented with the original signal) function is received by the receiver. In Claim 25, the receiver receives a signal that is not the forcing function of the combined signals of the first signal and returned resonance signal from the tag.

Applicants wish to bring to the Examiner's attention that the Vandebult patent is not listed in the PTO-892 form. Applicants request that a new PTO-892 form be issued to include the Vandebult patent.

For at least the reasons set forth above, it is respectfully submitted that the above-identified application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are respectfully requested.

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Should the Examiner believe that anything further is desirable in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below.

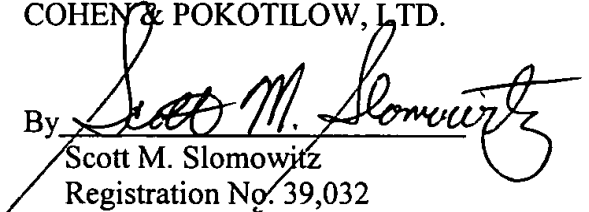
Respectfully submitted,

CAESAR, RIVISE, BERNSTEIN,
COHEN & POKOTILOW, LTD.

July 29, 2004

Please charge or credit our Account
No. 03-0075 as necessary to effect
entry and/or ensure consideration of
this submission.

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